Claims 1-118 were pending and presented for examination in this application. In an Office Action dated January 11, 2008, claims 1-118 were rejected. Applicants are amending claims 1 and 81 in this Amendment and Response. In view of the Amendments herein and the Remarks that follow, Applicants respectfully request that Examiner reconsider all outstanding rejections and withdraw them.

Response to Rejections under 35 U.S.C. 103

Claims 1-6, 20-21, 40, 45 and 55

In the 4th paragraph of the Office Action, claims 1-6, 20-21, 40, 45 and 55 have been rejected under U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 5,721,883 to Katsuo ("Katsuo") in view of U.S. Patent No. 6,476,793 B1 to Motoyama ("Motoyama") and an article entitled "Performance Analysis of Median Filtering on Meiko™ – A Distributed Multiprocessor System" by K.M. Poon and N.H.C. Yung ("Poon"). This rejection is now traversed.

Claim 1, as amended, recites:

> A system for printing time-based media data, the system comprising:
>
> a user interface for receiving user input, the user input specifying a multimedia function to perform on the time-based media and specifying a distribution of processing power for carrying out the specified multimedia function, wherein carrying out the specified multimedia function includes selecting a range of the time-based media;
>
> a printer, communicatively coupled to the user interface, the printer adapted to perform a first amount of processing satisfying the distribution of processing power indicated by the received user input, and to output an instruction to perform a second amount of processing satisfying the distribution of processing power indicated by the received user input; and

a processing device adapted to receive the instruction from the printer and perform the second amount of processing in response to the instruction from the printer.

The claims, as amended, would not have been obvious to one of ordinary skill in the art at the time of the invention. First, the references taken alone or in combination fail to disclose or suggest each of the claimed limitations as explained below. Second, the motivation for combining the references in the manner proposed by the Examiner relies on a hindsight reconstruction that is based on Applicants' own disclosure and is not based on teachings found in the prior art.

The Examiner relies on a combination of Katsuo, Motoyama, and Poon. Katsuo discloses a parallel processing system for parallel image processing. Multiple processors operate on a portion of the data to produce multiple partial image processing results and the partial results are integrated to form a final result. See, for example, Katsuo, Abstract. As the Examiner admits, Katsuo does not disclose "that said media data is specifically time-based media data; that said interface is a *user interface*; that said first processing device is a printing system, wherein said printing system outputs an instruction to perform a second amount of processing satisfying the distribution of processing power indicated by the received user input; and that the processing device *receives the instruction from the printer* and performs the second amount of processing *in response to the instructions from the printer*."

Motoyama discloses a video processing method and apparatus for color conversion and color adjustment. Motoyama addresses a problem in the prior art in which video color correction causes loss of gradation, and additionally provides an improved way of specifying a particular area to be subjected to color adjustment. See, for example, Motoyama col. 1, lines 30-43. The Examiner acknowledges that Katsuo in view of Motoyama still fails to disclose "that said printing system outputs an instruction

17

to perform a second amount of processing satisfying the distribution of processing power indicated by the received user input; and that the processing device *receives the instruction from the printer* and performs the second amount of processing *in response to the instruction from the printer.*"

Poon discloses a multiprocessing filtering system with a master-slave configuration. A master processor reads and writes image data and dispatches sub-images to the slave processors. (Poon p. 635 lines 1-10).

None of the cited references, considered alone or in the combination suggested by the Examiner, disclose or suggest a multimedia function that includes "**selecting a range of the time-based media**." Katsuo and Poon both generally disclose image processing systems but do not disclose that the image processing functions include selecting a range. Furthermore, Katsuo and Poon operate only on static images and do not operate on time-based media at all. Motoyama discloses a video printer that performs color conversion on individual frames of the video. Color conversion does not include selecting a range of time-based media, as claimed. Therefore, each of Katsuo, Motoyama and Poon fails to disclose or suggest the claimed limitation, alone or in the suggested combination.

The references furthermore fail to disclose or suggest, alone or in the combination suggested by the Examiner, "**a user input for…specifying a distribution of processing power for carrying out the specified multimedia function.**" The Examiner indicates that Katsuo discloses an input for specifying a distribution of processing power for carrying out the specified multimedia function at col. 4, lines 22-30 and col. 6, lines 40-49. However, Katsuo only discloses dividing up an image into small areas and carrying out parallel processing on each area. See, Katsuo, col. 4, lines 5-16. Katsuo uses "a

plurality of arithmetic processors for executing the same program" to process their respective image portions (Katsuo, col. 4, lines 9-11). Processing is thus always divided up evenly between processors and there is no input specifying a distribution of processing power. In the claimed invention, for example, as illustrated in FIG. 9, a user can choose to distribute 40% of processing power to a printer and 60% to a processing device. Neither Katsuo nor any of the cited reference disclose or suggest processing units that handle an input that specifies a distribution of processing power.

The references, alone or in the suggested combination, also fail to disclose or suggest "**a printer...adapted to perform a first amount of processing...and to output an instruction to perform a second amount of processing**." None of the cited references disclose or suggest a printer that distributes processing to another processing device. Motoyama discloses a printer that performs color conversion functions but does not distribute any processing to another device. Katsuo and Poon do not disclose printers. The Examiner relies on the combination of references, indicating that "one of ordinary skill in the art at the time of the invention would easily have recognized the utility of being able to print directly from the processing device that performs the multimedia imaging data processing." However, coupling a printer (such as the printer of Motoyama) to the parallel processing system of Katsuo for the purpose of printing still does not disclose or suggest that processing is distributed between the printer and a processing device. The combination, at best, suggests a processing system with the ability to print, but not a system in which the printer itself performs an amount of processing and distributes processing to another processing device. Thus, the combination still fails to disclose or suggested the claimed invention.

It would not have been obvious to one of ordinary skill in the art at the time of the invention to include "**a user interface for receiving user input...specifying a distribution of processing power for carrying out the specified time-based multimedia function**." The Examiner acknowledges that Katsuo does not include a user interface for specifying the distribution of processing power but instead relies on the combination of Katsuo with the user interface of Motoyama. The Examiner argues that claimed user interface would be obvious because it would be "easier and more convenient to be able to simply input what the first and second processing amounts are, rather than waiting for the parallel processing system to perform a set of configuration determinations." Office Action at p. 5, lines 17-19. However, the stated motivation is not found in the references.

Rather, it appears that the Examiner is impermissibly relying on Applicants' own disclosure of the claimed invention in order to find the motivation to reject these claims. Multiple locations in Applicants' disclosure refer to a user interface specifically for adjusting the distribution of processing power between devices. *See, e.g.*, Specification, paragraphs [0066]-[0067]. FIG. 9 illustrates an example user interface showing a slider control allowing the user to configure the printer to perform, for example, 40% of the processing while a PC performs 60% of the processing. Thus, the user interface advantageously provides the user with the flexibility of determining how processing power is distributed. The references, in contrast, provide no such suggestion, making such reliance by the Examiner impermissible. Moreover, there is no reason why one skilled in the art would be motivated to combine Katsuo, Poon, and Motoyama in the

manner suggested by the Examiner; the only motivation shown by the Examiner is the guidance provided by Applicants' own disclosure.

In addition to the above, the references instead suggest that it would be more convenient for a computer, rather than a user, to determine the workload distribution. For example, in col. 13, lines 47-53, Katsuo recites "the program developer can describe (write) program without being conscious of sharing of role to respective processors. As a result, the development time of program can be shortened. Thus, burden on the program developer can be lessened." Poon similarly discloses that the amount of processing should be computer-determined (using Eq. 6) and equally distributed between processors in order to maximize efficiency (see, for example, p. 635 col 1, lines 1-30). Thus, the references teach away from the proposed combination and would actually lead one of ordinary skill in the art in a direction divergent from the claimed invention.

The Examiner further argues that it is "common in the art to allow a user to set parameters…rather than requiring the user to accept automated settings." However, while some types of processing functions (such as those disclosed in Motoyama's user interface) are commonly based on user-supplied parameters, it is not common in the art (or suggested by the references) to provide a user interface feature allowing a user to specify a distribution of processing power. Conventional parallel processing systems such as that described in Katsuo distribute processing to a plurality of functionally identical processors (e.g., arithmetic processors 3). Because the processors are interchangeable, a conventional system such as Katsuo would not benefit from allowing a user to select how to distribute the processing. Thus, a user interface that receives a user

input specifying a distribution of processing power is neither common in the art nor suggested anywhere in the cited references.

For at least the reasons above, claim 1 is patentable over the cited references. Dependent claims 2-6, 20-21, 40, 45 and 55 each incorporate all the limitations of claim 1 and are patentable over the cited references for at least the same reasons.

Claims 81-84, 98-99 and 118

In the 22nd paragraph of the Office Action, claims 81-84, 98-99 and 118 have been rejected under U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 5,721,883 to Katsuo ("Katsuo") in view of U.S. Patent No. 6,476,793 B1 to Motoyama ("Motoyama").

Claim 81 recites a method for printing time-based media and includes limitations similar to those discussed above with respect to claim 1. Therefore claim 81 and its dependent claims are patentable over the cited references for at least the same reasons provided above.

Claims 7-19, 22-39, 42-44, 46-54, 56-80, 85-97 and 100-117

In the 5th-21st and 23rd-33rd paragraphs of the Office Action, the remaining dependent claims have further been rejected under U.S.C. 103(a) as allegedly being unpatentable over Katsuo and Motoyama in various combinations with Poon; U.S. Patent No. 6,118,888 to Chino; U.S. Patent No. 5,091,948 to Kametani; U.S. Patent Application Publication No. 2002/0101513 A1 to Halverson; U.S. Patent No. 6,661,622 B1 to Krum; U.S. patent No. 6,594,377 B1 to Kim; U.S. Patent No. 5,568,406 to Gerber; U.S. Patent Application Publication No. 2003/0220988 A1 to Hymel; U.S. Patent Application Publication no. 2002/0010641 A1 to Stevens; U.S. Patent No. 6,296,693 B1 to McCarthy;

U.S. Patent No. 5,115,967 to Wedekind; U.S. Patent Application Publication No. 2001/0003846 A1 to Rowe; and U.S. Patent No. 6,373,498 B1 to Abgrall.

The additional cited references all fail to disclose or suggest the limitations absent from Katsuo and Motoyama discussed above. Therefore, the claims are patentable over all of the referenced cited above, taken alone or in combination.

It is noted that dependent claims 85-118 recite various embodiments of the time-based multimedia function that are applied to the time-based media such as, for example, event detection, sound localization, motion analysis, etc. The references fail to provide any disclosure or suggestion of allocating processing that satisfies a user-specified distribution of processing power to carry out any of these multimedia functions. Katsuo discloses only a method for allocating image processing by evenly dividing up an image into areas and separately processing each area. The process described in Katsuo could not be applied to processing functions such as, for example, event detection, sound localization, or motion analysis function. Instead a different allocation process would be needed in order to allocate a user-specified distribution of processing power (e.g., 40% to the printer and 60% to the processing device). Thus, the dependent claims include their own patentable features in addition to the patentable features incorporated from their respective base claims.

CONCLUSION

The Examiner is asked to issue a Notice of Allowance for all pending claims. If any matters remain outstanding prior to allowance of the claims, the Examiner is invited to contact the undersigned representative.

Respectfully submitted,
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